

REMARKS

Claims 1-48 are pending in the application. Claims 42-48 have been canceled, without prejudice, as being drawn to a non-elected invention.

Claims 1-3, 8-14, 17, 20, 22-25, 27-29, 31-36, and 39-40 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Pat. No. 5,083,638 to Schneider. The remaining pending claims (4-7, 15, 16, 18, 19, 21, 26, 30, 37, 38) stand rejected under 35 U.S.C. § 103(a) as obvious over Schneider. The applicant respectfully traverses the Examiner's rejections for the following reasons.

As discussed in the prior reply mailed Dec. 30, 2002, applicant has argued that key aspects of the invention include the artificial intelligence (AI) aspect and the requirement that the human response system or operator be located "off-premises" relative to the AI processors. In view of a telephone conversation with the examiner discussing the prior reply and the final office action, applicant has amended the claims to claim with further particularity these aspects in a manner which is not taught or suggested by the Schneider reference.

In particular, claims 1 and 20 have been amended to refine *processing* of a verbal instruction, which the examiner argued could be anticipated by the "voice recognition" optionally performed by the robot module, to "*semantically processing*". This is supported in the specification at page 17, line 4 – page 20, line 2. "Semantics" relates to

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"[t]he meaning or the interpretation of a word, sentence, or other language form," The American Heritage Dictionary of the English Language (Fourth Edition, 2000). In distinction, "voice recognition" is:

The identification of spoken words by a machine. The spoken words are digitised (turned into sequence of numbers) and matched against coded dictionaries in order to identify the words.

Most systems must be "trained," requiring samples of all the actual words that will be spoken by the user of the system. The sample words are digitised, stored in the computer and used to match against future words. More sophisticated systems require voice samples, but not of every word. The system uses the voice samples in conjunction with dictionaries of larger vocabularies to match the incoming words. Yet other systems aim to be "speaker-independent", i.e. they will recognise words in their vocabulary from any speaker without training.

Another variation is the degree with which systems can cope with connected speech. People tend to run words together, e.g. "next week" becomes "neksweek" (the "t" is dropped). For a voice recognition system to identify words in connected speech it must take into account the way words are modified by the preceding and following words. The Free On-line Dictionary of Computing (2003) at <http://dictionary.reference.com/search?q=speech%20recognition>.

In addition, "voice recognition does not involve making sense of the content of the message." Julie K. Petersen, *Data & Communications Dictionary*, CRC Press, Advanced and Emerging Communications Technologies Series (1999). That is, "voice recognition" relates solely to the matching of spoken words or adjacent words against a coded dictionary to identify the spoken words. Nothing in Schneider warrants giving any broader meaning to the phrase "voice recognition" as used therein. In contrast, "semantic processing," as used in the claims, is intended to include assigning meaning to spoken words due to the syntactical organization of a group of words. This is not taught or suggested by Schneider.

Moreover, there is no incentive to utilize "semantic processing" in the automated grocery check-out system of Schneider. In Schneider the customer on his or her own has already selected all products for the sale, and all that is required is to pay for the products. This portion of the transaction does not require significant communication between the customer and robot check-out system. In contrast, the system of the claimed invention is particularly well-adapted where the customer has yet to select an item for sale and is placing an order that may include a special order which differs from standard products, where the customer may request assistance in choosing a suitable product, where the customer may change his or her mind in the middle of placing an order, where potential errors from errant speech can be eliminated, etc.

In addition, claims 29, 31 and 40 have been amended with respect to more clearly defining what is meant by "off-premises". This is supported in the specification:

The call center 16 is preferably located on different premises than the CIT 12 and the computer system 14, and more preferably located in a country or region having a relatively lower labor cost than the country or region in which the CIT is located. (Page 11, lines 22-25)

In the method of claim 29, "said intervening is performed from a location located in a different building relative to said interactive terminal." In the methods of claims 31 and 40, the artificial intelligence processor and the customer are located in a first building, while the real-time human support originates from a second building different from said first building. As similarly stated in the prior reply, there is no teaching or suggestion in Schneider to provide the supervisory employee in another building relative to the robot POS, particularly since the supervisory module is physically connected to the robot POS modules it supervises via a cable 140, and since the supervisor can be approached for

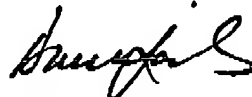
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purposes of payment. Moreover, it is not apparent in Schneider why there would be incentive to re-locate the supervisory module at such a significant distance from the robot modules it supervises.

Several dependents claims have also been amended so that their language is in accord with the amendments to the independent claims discussed above.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



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